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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/602,359

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Boris Tsybakov

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EXAMINER

LEE, ANDREW CHUNG CHEUNG

ART UNIT

PAPER NUMBER

2619

NOTIFICATION DATE

DELIVERY MODE

04/22/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/602,359	<b>Applicant(s)</b> TSYBAKOV ET AL.	
	<b>Examiner</b> Andrew C. Lee	<b>Art Unit</b> 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 29-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9, 12-17 and 29-36 is/are rejected.
- 7) ☒ Claim(s) 7, 10, 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Claims 1, 5, 6, 13 and 17 had been amended.

New claims 29 – 36 had been added.

Claims 18 – 28 had been canceled.

2. Claims 1 – 17, 29 – 36 are pending.

### ***Claim Objections***

3. Claim 29 is objected to because of the following informalities:

Regarding claim 29, the double colon “::” after the phrase “the steps of” should be corrected as single colon “:”. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 34 – 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claim 34, the amended subject matters “a first data rate less than a maximum data rate of a subscriber station” disclosed in lines 3 -4, and “a second data rate adequate to handle an overflow up to

the maximum data rate of the subscriber station” as disclosed in lines 6 – 7 are not disclosed explicitly in the original claims, and the claim(s) contains subject matter which was not described in the specification at the time the application was filed, had possession of the claimed invention.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 29 – 33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 29, according to page 53 of Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility “A computer-readable medium including computer-executable instructions for performing steps of:”, the claim 23 is non-statutory subject matter because the claim 23 does not disclose explicitly “the claimed computer-readable medium encoded with a computer program (or computer executable instructions).

Additionally, all of the further limitations in claims 30 – 33 are also rejected under 35 U.S.C. 101, since they are dependent upon the independent claim.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 – 6, 8 – 9, 12 – 17, 29 – 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherzer et al. (US 6901062 B2), and Kim et al. (US 6870824 B1) in view of Czaja et al. (US 6424631 B1).

Regarding claims 1, 6, 17, 29, Scherzer et al. disclose a method of communications, a communications station, computer-readable medium (Fig. 2, col. 6, lines 4 – 21, col. 7, lines 2 - 12, "ASIC" as computer-readable medium), comprising: a processor, means for dividing a plurality of subscriber stations into a plurality of groups ("to group the subscriber units into a number of groups (e.g. M groups)" correlates to dividing a plurality of subscriber stations into a plurality of groups, column 9, lines 33 – 42); assigning a different plurality of orthogonal codes to each of the groups (column 10, lines 60 – 65), the number of the orthogonal codes assigned to one of the groups being less than the number of subscriber stations in said one of the groups (column 11, lines 10 – 19); encoding communications to one of the subscriber stations in said one of the groups at a data rate (column 17, lines 46 – 52); and

Scherzer et al. do not disclose plurality of orthogonal codes for supplemental traffic channels.

Kim et al. teach plurality of orthogonal codes for supplemental traffic channels (col. 8, lines 37 – 54).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Scherzer et al. to include the features

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of plurality of orthogonal codes for supplemental traffic channels as taught by Kim et al. One of ordinary skill in the art would be motivated to do so for designating forward spreading code for spreading forward common control message or short packet user data transmitted on a forward common channel (as suggested by Kim et al., see col. 3, lines 17 – 19).

Kim et al. also disclose spreading codes and data rate (col. 8, lines 11 – 31).

Scherzer et al. and Kim et al. do not disclose determining whether to spread at least a portion of communications to said one of the subscriber stations with one of the orthogonal codes assigned to said one of the groups as a function of the data rate.

Czaja et al. teach determining whether to spread at least a portion of communications to said one of the subscriber stations with one of the orthogonal codes assigned to said one of the groups as a function of the data rate (Fig. 3, column 7, lines 47 – 66).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al. and Kim et al. to include the features of determining whether to spread at least a portion of communications to said one of the subscriber stations with one of the orthogonal codes assigned to said one of the groups as a function of the data rate as taught by Czaja et al. in order to provide an apparatus and method for determining the rate of a variable rate encoded data frame (as suggested by Czaja et al., see column 3, lines 8 – 10).

Regarding claims 2, 8, 30, Scherzer et al. disclose the method, computer-readable medium claimed further comprising allocating to said one of the subscriber stations one or more of the orthogonal codes assigned to said one of the groups, said one of the orthogonal codes being selected from the one or more of the orthogonal codes allocated to said one of the subscriber stations (column 10, lines 60 – 65, column 11, lines 40 – 46).

Regarding claims 3, 9, 31, Scherzer et al. disclose the method, computer readable medium claimed further comprising allocating to each of the subscriber stations in said one of the groups one or more of the orthogonal codes assigned to said one of the groups (column 10, lines 60 – 65), and using each of the orthogonal codes in said one of the groups to spread at least a portion of communications to different subscriber stations in said one of the groups (column 11, lines 40 – 46),

Scherzer et al. do not disclose the orthogonal code being used to spread said at least a portion of the communications to each of the different subscriber stations being selected from the respective one or more of the codes allocated thereto.

Czaja et al. teach the orthogonal code being used to spread said at least a portion of the communications to each of the different subscriber stations being selected from the respective one or more of the codes allocated thereto (Fig. 6A, Fig. 7, column 11, lines 1 – 14, column 12, lines 56 – 63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al. to include the

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features of the orthogonal code being used to spread said at least a portion of the communications to each of the different subscriber stations being selected from the respective one or more of the codes allocated thereto as taught by Czaja et al. in order to provide an apparatus and method for determining the rate of a variable rate encoded data frame (as suggested by Czaja et al., see col. 3, lines 8 – 10).

Regarding claims 4, 12, 32, Scherzer et al. disclose the method, the communication station, and computer-readable medium claimed further comprising spreading a portion of the communications to said one of the subscriber stations with a orthogonal code assigned to the groups (col. 10, lines 60 – 65).

Scherzer et al. do not disclose the method, communication station, and computer-readable medium claimed further comprising spreading a second portion of the communications to said one of the subscriber stations with a second orthogonal code different from each of the orthogonal codes assigned to the groups.

Czaja et al. teach spreading a second portion of the communications to said one of the subscriber stations with a second orthogonal code different from each of the orthogonal codes assigned to the groups (“repeated twice for the  $\frac{1}{2}$  rate” correlates to spreading a second portion of the communications to said one of the subscriber stations with a second orthogonal code, column 11, lines 15 – 23, lines 45 – 54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al. to include the features of spreading a second portion of the communications to said one of the



subscriber stations with a second orthogonal code different from each of the orthogonal codes assigned to the groups as taught by Czaja et al. in order to provide an apparatus and method for determining the rate of a variable rate encoded data frame (as suggested by Czaja et al., see col. 3, lines 8 – 10).

Regarding claims 5, 13, 33, Scherzer et al. disclose the method, the communication station, and computer-readable medium claimed further comprising spreading a portion of the communications to said one of the subscriber stations with a orthogonal code assigned to the groups (column 10, lines 60 – 65).

Scherzer et al. do not disclose the method, communication station, and computer-readable medium claimed wherein the data rate of the communications comprises a full rate and less than a full rate, and wherein said at least a portion of the communications to said one of the subscriber stations is spread with said one of the orthogonal codes when the data rate of the communications is the full rate, and wherein said at least a portion of the communications to said one of the subscriber stations is not spread with said one of the orthogonal codes when the data rate of the communications is less than the full rate.

Czaja et al. teach the method, communication station, and computer-readable medium claimed wherein the data rate of the communications comprises a full rate and less than a full rate (“full rate 9600, half rate 4800, quarter rate 2400” correlates to a full rate and less than a full rate, column 6, lines 3 – 9), and wherein said at least a portion of the communications to said one of the subscriber stations is spread with said one of

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the orthogonal codes when the data rate of the communications is the full rate (Fig. 6A, column 11, lines 1 – 14), and wherein said at least a portion of the communications to said one of the subscriber stations is not spread with said one of the orthogonal codes when the data rate of the communications is less than the full rate (Fig. 5, column 10, lines 51 – 67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al. to include the features of wherein the data rate of the communications comprises a full rate and less than a full rate, and wherein said at least a portion of the communications to said one of the subscriber stations is spread with said one of the orthogonal codes when the data rate of the communications is the full rate, and wherein said at least a portion of the communications to said one of the subscriber stations is not spread with said one of the orthogonal codes when the data rate of the communications is less than the full rate. as taught by Czaja et al. in order to provide an apparatus and method for determining the rate of a variable rate encoded data frame (as suggested by Czaja et al., see column 3, lines 8 – 10).

Regarding claim 14, Scherzer et al. disclose the method, the communication station claimed further comprising spreading a portion of the communications to said one of the subscriber stations with a orthogonal code assigned to the groups (column 10, lines 60 – 65).

Scherzer et al. do not disclose the communications station claimed wherein the less than full rate comprises a data rate equal to  $1/2$  the full rate.

Kim et al. teach the communications station claimed wherein the less than full rate comprises a data rate equal to  $1/2$  the full rate (col. 8, lines 16 – 23).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Scherzer et al. to include the features of the communications station claimed wherein the less than full rate comprises a data rate equal to  $1/2$  the full rate as taught by Kim et al. One of ordinary skill in the art would be motivated to do so for designating forward spreading code for spreading forward common control message or short packet user data transmitted on a forward common channel (as suggested by Kim et al., see col. 3, lines 17 – 19).

Czaja et al. also teach the communications station claimed wherein the less than full rate comprises a data rate equal to  $1/2$  the full rate (“half rate 4800” correlates to the less than full rate comprises a data rate equal to  $1/2$  the full rate, column 6, lines 3 – 9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al. to include the features of the communications station claimed wherein the less than full rate comprises a data rate equal to  $1/2$  the full rate as taught by Czaja et al. in order to provide an apparatus and method for determining the rate of a variable rate encoded data frame (as suggested by Czaja et al., see column 3, lines 8 – 10).

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Regarding claim 15, Scherzer et al. disclose the method, the communication station claimed further comprising spreading a portion of the communications to said one of the subscriber stations with a orthogonal code assigned to the groups (column 10, lines 60 – 65).

Scherzer et al. do not disclose the communications station claimed wherein the less than full rate comprises a data rate equal to  $1/2$  the full rate and a data rate equal to  $1/8$  the full.

Kim et al. teach wherein the less than full rate comprises a data rate equal to  $1/2$  the full rate and a data rate equal to  $1/8$  the full (col. 8, lines 11 – 31).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Scherzer et al. to include the features of wherein the less than full rate comprises a data rate equal to  $1/2$  the full rate and a data rate equal to  $1/8$  the full as taught by Kim et al. One of ordinary skill in the art would be motivated to do so for designating forward spreading code for spreading forward common control message or short packet user data transmitted on a forward common channel (as suggested by Kim et al., see col. 3, lines 17 – 19).

Czaja et al. also teach the communications station claimed wherein the less than full rate comprises a data rate equal to  $1/2$  the full rate and a data rate equal to  $1/8$  the full rate (“half rate 4800bps and eighth rates 1200 bps” correlates to the less than full rate comprises a data rate equal to  $1/2$  the full rate and a data rate equal to  $1/8$  the full rate, column 6, lines 3 – 9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al. and Kim et al. to include the features of the communications station claimed wherein the less than full rate comprises a data rate equal to  $1/2$  the full rate as taught by Czaja et al. in order to provide an apparatus and method for determining the rate of a variable rate encoded data frame (as suggested by Czaja et al., see column 3, lines 8 – 10).

Regarding claim 16, Scherzer et al. disclose the method, the communication station claimed further comprising spreading a portion of the communications to said one of the subscriber stations with a orthogonal code assigned to the groups (column 10, lines 60 – 65).

Scherzer et al. and Kim et al. do not disclose explicitly the communications station claimed wherein the encoder comprises a vocoder.

Czaja et al. teach the communications station claimed wherein the encoder comprises a vocoder (“vocoder” correlates to the encoder comprises a vocoder, column 5, lines 27 – 42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al. and Kim et al. to include the features of the communications station claimed wherein the encoder comprises a vocoder as taught by Czaja et al. in order to provide an apparatus and method for determining the rate of a variable rate encoded data frame (as suggested by Czaja et al., see column 3, lines 8 – 10).

***Allowable Subject Matter***

10. Claims 7, 10, 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

11. Applicant's arguments filed on 2/04/2008 with respect to claims 1 – 17, 29 – 36 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Gopalakrishnan et al. disclose method for data rate selection in a wireless communication system.
- b) Willenegger et al. (US 20030224798 A1) disclose dynamic channelization code allocation.
- c) Weaver Jr. (6044103) discloses reduced peak-to-average amplitude dual channel link.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C Lee/  
Examiner, Art Unit 2619  
<4/13/2008>

/Edan Orgad/  
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